FOH 010555D

ECOLOGY AND ENVIRONMENT, INC.
FIELD INVESTIGATION TEAM
SITE SAFETY PLAN

A. GENERAL INFORMATION

SITE: Chemical and Mineral Reclamation TDD NO.: FC5-8704-046

LOCATION: 3418 Crescent Ave Cleveland WSTS/ACCOUNT NO: 01401055S

PLAN PREPARED BY: R. Graham DATE: 6/1/87

APPROVED BY: ~~Anne M. Stumpf~~ DATE: 6/2/87

OBJECTIVE(S): (including description of work to be performed): Perform Soil boring on-site and sample borings with depth. Borings will be to 10 feet 5 soil borings & 18 samples)

PROPOSED DATE OF INVESTIGATION: 6/9/87 - 6-12-87

BACKGROUND REVIEW: Complete: X Preliminary: _____

DOCUMENTATION/SUMMARY: Overall Hazard: Serious: _____ Moderate: _____
Low: X Unknown: _____

B. SITE/WASTE CHARACTERISTICS

WASTE TYPE(S): Liquid X Solid X Sludge X Gas _____

CHARACTERISTIC(S): Corrosive ____ Ignitable ____ Radioactive ____ Volatile ____
Toxic X Reactive ____ Unknown X Other (Name) persistent, carcinogens

FACILITY DESCRIPTION: The site is currently a vacant lot on the floodplain of the Cuyahoga River. The site was cleaned up by US EPA in 1981.

Principal Disposal Method (type and location): Drum Storage.

Unusual Features (dike integrity, power lines, terrain, etc.): 20' high retaining wall to southwest

Status: (active, (inactive), unknown) All buildings were demolished as part of the cleanup

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History: (Worker or non-worker injury; complaints from public; previous agency action): See attached history

C. HAZARD EVALUATION

(Use Hazard Evaluation of Chemicals sheets for specific or representative chemicals present.): See attached data summary sheets as well as the following Hazard Evaluation Forms. See sample results sheet.

D. SITE SAFETY WORK PLAN

PERIMETER ESTABLISHMENT: Map/Sketch Attached yes Site Secured? yes

Perimeter Identified? yes Zone(s) of Contamination Identified? NO

No deep borings have been drilled at the site. Assume entire site to be contaminated.

PERSONAL PROTECTION

Level of Protection: A ___ B ___ C ___ D X

Modifications: Upgrade to level "C" if conditions warrant. If dry and dusty conditions exist, upgrade to Level C may be necessary for borings & sampling

Surveillance Equipment and Materials: HNu, Radmini, Explosimeter

No HCN detection equipment needed as no history of cyanide on site exists.

HNu action levels: 0 ppm - level D

1-5 ppm - level C

>5 ppm Abandon site & contact RSC

Radmini - any reading above background - abandon site & contact RSC

Explosimeter - >30% LEL - abandon site & contact RSC

Ozmeter - <19.5% or >25% - abandon site, contact RSC.

DECONTAMINATION PROCEDURES: All potentially contaminated equipment would be stored until necessary, then rinsed with clean water. Rinse water will be left on-site with prior permission.

Special Equipment, Facilities, or Procedures: None. Gloves + tyveks will be worn during sampling

SITE ENTRY PROCEDURES: The entire site will be cleared with the HNu, radmeni and explosimeter. Obey buddy system at all times Before site entry, permission must be obtained. All exits will be located before site entry

Team Member	Responsibility
Richard C. Graham	Team Leader
Craig Alinanza	Sampler
Tom Sullivan	Safety officer

WORK LIMITATIONS (Time of day, etc.): Work in daylight hours only. Monitor for adverse effects of heat or cold.

INVESTIGATION-DERIVED MATERIAL DISPOSAL: All potentially contaminated materials will be double bagged and left on-site. Prior permission will be obtained

I. SUMMARY OF EVENTS

A. Location

The Chemical Mineral Reclamation (CMR) site is located on the near west side of Cleveland, Ohio (see Figure 1) at 3418 Crescent Avenue. It is bordered by the Memorial Shoreway West to the west and the Old Cuyahoga River Bed to the north. A boat marina is located directly across the river from the site, and a company called Universal Rebuilding had offices adjacent to the site. The Cleveland Plain Dealer Publishing Company owned the site and leased it to Mr. Rodney Cronin. Mr. Cronin used the site to store waste chemicals. He moved from the original place of business while under a court order to clean up his original operation.

B. Initial Situation

When first discovered, CMR was located at 421 Stones Levee in the Cleveland "Flats" (see Figure 1). A fire occurred at 601 Stones Levee on March 18, 1979, just next door to the original site.

On March 21, 1979, the USEPA, the U.S. Coast Guard, the Cleveland Fire Department, and the Ohio EPA conducted a walk-through inspection of CMR's 421 Stones Levee site (see Appendix B). Mr. Rodney Cronin arrived on scene during the inspection and explained that he had from 2,000 to 3,000 55-gallon drums of solvent and roof tars in addition to chemicals such as acetates, butyls, ketone chains, toluene, xylene, zinc, chloride, and atimony oxides stored at the site. Mr. Cronin explained that he was storing the material for eventual reclamation. The storage warehouse was rundown, with all windows and doors broken. The warehouse had drums stacked to the ceiling and a material, which Mr. Cronin identified as lining material, was spilled on the floor and ground outside the warehouse. All floor drains and sewers in this building had been blocked. A sample of the lining material was obtained during this inspection. Many almost-empty drums were also noted in storage behind this building.

On March 27, 1979, the Ohio EPA, the USEPA, and the County Health Department conducted a follow-up inspection of CMR's Stones Levee site which led to the discovery of about 2,000 more drums of solvents and resins in the back of 601 Stones Levee. (See Ken Harsh's 3/29/79 report in Appendix B). Other drums were stored in a broken-down trailer on scene. In addition, piles of various materials were discovered on the grounds, while piles of resinous substances and puddles of oil were evident. It was noted that runoff from a large pile of calcium compounds, paint resins, and solid antimony compounds could possibly pose a threat to the nearby Cuyahoga River during severe rainstorms.

On April 20, 1979, the Cleveland Fire Department sent Mr. Cronin, via certified mail, a list of violations of their Municipal Ordinances apparent at CMR's Stones Levee site. Mr. Cronin was notified to abate these violations or to file an appeal with the Cleveland Board of Building Standards by May 20, 1979.

On May 7, 1979, the USEPA collected samples to verify the types of materials stored at the site. In general, the analysis verified Mr. Cronin's description of solvents such as acetone, trichloroethylene, and carbon tetrachloride being present in the drums sampled. The results can be found in Appendix A.

On July 11, 1979, Federal Judge John Manos ordered CMR to cease accepting hazardous and solid waste for storage at its Stones Levee site, to adequately ventilate its facilities, to cease storage of waste in containers not meeting OSHA standards, and to separate drums containing flammable waste from those containing oxidizable material. Mr. Cronin then began the slow process of cleaning up the site under the supervision of the U.S. Attorney's Office. Then in late 1979, CMR moved its operation from the Stones Levee sites to 3418 Crescent Avenue in Cleveland. The disposal of chemicals continued from that location until July 2, 1980 when a fire was set to CMR's Crescent Avenue warehouse. The fire was confined to the mixing-vat area of the building, but it caused a major air pollution problem that required temporarily closing the Memorial Shoreway West. After the fire, Judge Manos ordered Mr. Cronin to stay off the site until he could produce a written clean up plan that met with the court's approval. But before the court order, Mr. Cronin did construct a small dike around the vat area at the request of the Coast Guard. This was to prevent the vat contents from entering the river if the building collapsed; however, the dike was not constructed very well.

C. City of Cleveland Response

After the fire, the city condemned the building for demolition. But the building could not be demolished because one side was full of hundreds of containers of chemicals, and the other side had six vats full of a mixture of chemicals, water from the fire fighting effort, and building material from the roof of the building that had partially collapsed. The city was concerned that the rest of the building would collapse on the chemicals, so the demolition department hired a contractor to remove all of the drums from the building and stage them outside on plastic sheets. During the period between July and October 1980, the Cleveland Division of Air Pollution Control had their chemist inspect each container to determine what was in each one according to physical properties. A total of 1,597 containers were inspected, ranging in size from 5 to 55 gallons. Materials found were paints, solvents, tar, grease, and resins. On September 29, 1980, a composite sample of the vats was collected by the city and sent to CRL for PCB analysis. On October 24, 1980, the analysis found 10 ppm of PCBs in the composite sample. Thus, each individual vat was again sampled by the city on November 26, 1980 and sent along with composite samples of 7 groups of drums from the site to the CRL for PCB analysis. On February 9, 1981, the analytical results were received and showed none of the samples to contain more than 50 ppm PCBs. (See Appendix A for results). The city then approached a waste oil reclaimer to take the material in the vats for recycling, but they were not interested.

It should also be noted that after the Superfund cleanup was complete, the city of Cleveland Demolition Department did demolish the building during the summer of 1982. This action left the site as it presently stands - a vacant lot.

D. U.S. Coast Guard Response

During the July 2, 1980 fire, the USCG did respond to monitor the situation. On July 3rd, after the fire was put out by the Cleveland Fire Department, the USCG inspected the site and determined that there was no "imminent threat" to navigable waters; thus, they were not able to use 311(k) funds for any type of cleanup.

In order to reevaluate the situation, a meeting of the RRT was called by the U.S. Coast Guard and attended by representatives of the U.S. Attorney's Office, the USEPA, Ohio EPA, and the City of Cleveland Air Pollution Control Division and Department of Law on February 27, 1981. The RRT concluded that an imminent and hazardous threat to navigable waters now existed at CMR and that expenditure of Sec. 311(k) funds to abate the threat was justified. The threat identified included overflow and leakage from six 3,500 gallon vats on site, storage of approximately 2,000 drums containing various substances, and ground saturation with possible migration of substances spilled during the preceding eight months. In addition, at this meeting, a request for 311(k) funding was granted through Project No. 210036 with a ceiling of $10,000. These monies were to be used for preliminary sample analysis and first aid abatement efforts for prevention of flow of product to the Cuyahoga River. The Coast Guard provided the OSC. The Plain Dealer Publishing Company verbally refused to accept responsibility for the cleanup when approached by the USCG.

Between March 27, 1981 and April 13, 1981, the Coast Guard worked with Wiseman Oil Company to remove an estimated 10,500 gallons of flammable solvents from the vats and some of the drums on the site. This work was done by Wiseman Oil Company at no cost to the government because the material was recycled.

On June 9, 1981, Mr. Cronin was given an opportunity in writing by the Coast Guard to finish cleaning up of the site. He verbally accepted responsibility for the project, but no results ensued. Thus, on July 1, 1981, a second letter was sent by the Coast Guard notifying Mr. Cronin of the conditions under which he would be allowed to clean up the facility. No reply was received from Mr. Cronin.

Between July and September 1981, vandalism at CMR resulted in the dumping of approximately 30 drums of chemicals onto the ground in the yard area. Contents were identified as resins and paint residues. The material generally solidified upon exposure with no apparent runoff to water. In addition, youths were caught inhaling fumes from drums of unknown substances. The Plain Dealer contracted to have cement poured over the tops of approximately 300 drums at the site to secure them.

On October 13, 1981, the USCG terminated their removal activities under Sec. 311(k) funding. The site was then turned over to the USEPA for Superfund action.

E. USEPA Response

On October 23, 1981, the USEPA issued a list of the top 114 waste sites in the nation to be addressed by Superfund; CMR was one of them. Because of the appearance of this site on that list, and since the USCG had turned the site over to the USEPA, the OSC made a site inspection on November 16, 1981. During the inspection of this site, the contents of an additional 25 of the drums in the yard area were found spilled on the ground. Most of the material spilled was either pooled on the ground or had already soaked in, but some of the material could have been washed into the river by rain runoff (see Figure 2).

The rest of the site consisted of approximately 700 drums that had been staged by the city outside of the warehouse with another 700 drums inside the garage area. The vats were about half full of liquids. Thus, on November 19, 1981, a request for $170,000 of immediate removal funds was made (see Polrep 1, Appendix C). After some discussion with USEPA headquarters personnel, a project ceiling of $205,000 was approved on November 20, 1981 to take immediate removal action. Also on November 20, 1981, both Mr. Cronin, the site operator, and the Plain Dealer Publishing Company, the propery owner, were given verbal demands to cleanup the site. The Plain Dealer refused to take action, but Mr. Cronin stated that he would try to develop a written cleanup plan by the deadline of noon November 24, 1981. Mr. Cronin did not contact the OSC by the deadline, thus, on November 25, 1981, a Notice to Proceed was issued by the OSC to Samsel Services Company of Cleveland, Ohio to start sampling drums and to cleanup spilled material on site. As the cleanup proceeded, the additional tasks of compatability testing, removal, and disposal of liquids and solids were also given to Samsel Services Company. Also, due to the past activities of vandals at this site, the OSC decided that security would be necessary to prevent any further problems while the contractor was not working on the site.

On November 30, 1981, the soil, contaminated by previous vandalism, was scraped into a pile and covered. Samples were taken, as the soil was being scraped into the pile, for EP toxicity analysis to evaluate disposal options. On December 31, 1981, the results showed low levels of contamination (see Appendix A), thus, the dirt was able to be disposed of at the Doherty Landfill in Geneva, Ohio on March 30, 1982 as the weather broke.

Starting on November 25, 1981, each drum was sampled, starting with the drums that had been moved outside from the warehouse by the city. Next, the drums in the garage area were also sampled. This sampling was completed by December 23, 1981. Compatability testing was done simultaneously with the drum sampling and was completed on February 7, 1982. These compatability tests helped to segregate the waste into categories for disposal purposes. The categories were organic and inorganic with the organic category being broken down into four subcategories of nonchlorinated/nonflammable, chlorinated/nonflammable, chlorinated/flammable, and nonchlorinated/flammable. The drums were then color coded according to their category for easy segregation. The compatability samples were composited by category and sent on March 12, 1982 to be analyzed for disposal parameters.

This analysis was completed by April 1, 1982 and it was found that the chlorinated/nonflammable and nonchlorinated/flammable composite samples contained PCB concentrations between 10 and 50 ppm. Thus, a drum-by-drum analysis had to be done on the drum samples collected in November and December 1981 from those two categories to locate the PCB-contaminated drums. Six drums containing greater than 50 ppm PCBs were found out of the 730 drums analyzed. These six drums were overpacked and sent to the Rollins Environmental Services incinerator in Deer Park, Texas on May 24, 1982.

All of the other organic liquid was pumped into tankers for shipment to the Rollins Environmental Services incinerator in Bridgeport, New Jersey. There was a total of 25,500 gallons of organic liquid sent to Bridgeport during the cleanup in five separate loads. Two loads left on May 3, 1982, another two loads were shipped on May 24, and the last load left the site on May 25, 1982. Also, 4,000 gallons of inorganic liquids removed from the vats and some of the drums were sent to Aichemtron in Cleveland on May 20, 1982 for pretreatment before discharging to the sanitary system. Sludge from the vats was drummed, solidified, and sent to the Fondessy Landfill along with the sludges left in the drums. A total of 1,260 drums were disposed of at the Fondessy Landfill leaving the site in 24 shipments between April 19 and May 25, 1982. It should also be noted that 100 drums of grease were sent to the Doherty Landfill in Geneva, Ohio for disposal on April 9 and 10, 1982. The cleanup was completed on May 25, 1982.

During the cleanup, a number of potential generator names were discovered on some of the drums after they were moved. This information was forwarded to the Region V, Enforcement Division (see memo of August 19, 1982 to Eileen Bloom in Appendix B). Along the same line, it should also be noted that the Ohio EPA located the names of a few other possible generators that can be found in their letter dated August 30, 1982 (see Appendix B).

As the cleanup progressed, cost increases raised the estimate of the job to $455,000. On April 27, 1982, the OSC asked for the first $100,000 increase, and it was approved on May 2, 1982. The second $150,000 increase was asked for on May 13, 1982, and was approved on May 14, 1982. The discovery of PCBs on the site was a major factor for the cost increase. Also, the winter of 1982 was one of the worst in Cleveland's history. With a record snowfall and very cold temperatures, it was impossible to work on the site during January, February, and most of March. The OSC, in retrospect, also believes that the initial cost estimate was low due to a lack of experience and available guidance material in developing such estimates.

II. Effectiveness of Removal Actions

Removal actions taken by Mr. Cronin, the site operator, were slow and questionable. After the July 2, 1980 fire, a federal judge ordered Mr. Cronin to stay off the site. The property owner took only minimal security actions at the site. The city removed the drums from the warehouse and staged them outside, which was helpful as a preventative measure in case the building collapsed, and facilitated sampling and removal efforts. The USCG's efforts resulted in the removal of 10,500 gallons of solvents at an estimated savings of $10,000 to the government. Also their actions prevented the vats from overflowing. Federal removal actions were as effective as possible given the conditions mentioned in Section III.

III. Problems Encountered

During January, February, and a good part of March 1982, the record snowfall and cold weather made work on the site impossible. Some of the material in the drums was frozen and the drums themselves were frozen to the ground. Due to the weather delay, it was necessary to work overtime during April and May to finish the cleanup within the alloted 6 months for a removal action. During some weeks, the contractor worked 12-hour days, 6 or 7 days a week.

Another problem encountered was in the location of a disposal site for the organic liquids. Originally, the plan was to ship the material to the MSD incinerator in Cincinnati, Ohio, but the incinerator was shutdown in January of 1982 and did not reopen until after the cleanup was complete. The next option was to send the material to the Robert Ross & Sons incinerator in Grafton, Ohio. This facility had a past history of not wanting to accept material from abandoned sites, but when contacted, they showed a willingness to consider the material. After analysis was completed, according to their specifications, the small amount of PCBs present (2 to 3 ppm) caused them to reject the material. We also found higher concentrations of PCBs in other samples as was previously mentioned. Finally, contact was made with Rollins Environmental Services in Bridgeport, New Jersey, and after their inspection of the samples, they agreed to accept the material once the high PCB drums were segregated out. They also were able to accept the high PCB material at their Deer Park, Texas facility for incineration.

IV. Recommendation

It is this OSC's recommendation that no further cleanup work is needed at this site. All drums and vat material have been removed; the buildings have been raised by the city of Cleveland; and, the soil was scraped to remove all visible contamination.

The OSC also recommends that a reference system be compiled containing information to better enable an OSC to estimate cleanup costs. This system could possibly consist of a breakdown of past cleanup costs plus information on disposal sites including costs and their requirements for accepting material.